37. The integration process at first stage

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Probabilidad Imposible: The integration process at first stage

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In the first stage, the integration process consists of the union of the unified database of categories, former application in the Unified Application (created in the unification process, fourth phase), and the global matrix, former application in the Artificial Research by Deduction in the Global Artificial Intelligence (created in the standardization process, the third phase), uniting both applications in only one application, the matrix, as the first stage, application stage, for the final model of Global Artificial Intelligence.

Impossible Probabilit proposes that this union takes the form of a single application—the matrix—structured to replicate the human brain, with two hemispheres: one based on categories (concepts), the other on factors.

Just as the human brain has two hemispheres—one for language and the other for mathematical relations—the matrix is structured similarly. One hemisphere focuses on categorising the world through concepts, while the other focuses on identifying mathematical relations between factors.

In Impossible Probability, the hemisphere in the matrix focused on categories is the conceptual hemisphere, and the hemisphere in the matrix focused on factors is the factual hemisphere, and both hemispheres represent different kinds of human knowledge.

In the conceptual hemisphere resides the artificial comprehension skills developed by the Unified Application, and in the factual hemisphere resides the artificial explanation skills developed by the Artificial Research by Deduction in the Global Artificial Intelligence.

The Unified Application, as the manager of the first stage, develops global comprehension using categories from the conceptual hemisphere. It constructs conceptual schemes, maps, sets, and models that represent both external reality and the technologies within the Global Artificial Intelligence.

The comprehension skills developed by the Unified Application as a manager of the whole application as the first stage in the final model of the Global Artificial Intelligence are the development of global conceptual: schemes, maps, sets, models; about

absolutely everything in [the reality](), using for that purpose as concepts the categories gathered in the conceptual hemisphere, as well as conceptual: schemes, maps, sets, models; regarding to any technology, including any technology working on/within the Global Artificial Intelligence.

The explanation skills developed by the Artificial Research by Deduction in the Global Artificial Intelligence in the second stage, are all those skills for the tracking of the factual hemisphere searching for any mathematical relation in any combination of factors, in order to make deductions that if rational can be included in the database of rational hypothesis, the rational truth.

Thanks to the conceptual hemisphere the Unified Application can conceptualise, so it can comprehend the world, and thanks to the factual hemisphere the Artificial Research by Deduction in the Global Artificial Intelligence can make mathematical deductions, so it can explain the world.

Due to the similarities between artificial comprehension skills developed by the Unified Application based on the conceptual hemisphere, and the artificial explanation skills based on the Artificial Research by Deduction in the Global Artificial Intelligence based on the factual hemisphere, both hemispheres, conceptual and factual gathered in the same matrix, are a replication of the human brain structure.

The matrix as an application, the first stage, in the final model of the Global Artificial Intelligence, as a replica of the human brain, structured in two hemispheres, conceptual and factual, is going to have inside all possible knowledge around the world and itself, and in this sense, the matrix is going to have a very deep encyclopaedic knowledge even beyond the traditional concept of encyclopaedia.

Traditionally for encyclopaedic knowledge, is understood that global knowledge formed by all kinds of definitions in all [science](), discipline, activity, and traditional encyclopaedic knowledge is developed in the first stage of application by the Unified Application in the unification process (fourth phase).

But once the unification process has been overcome by the integration process ([sixth phase]()), now the matrix in the sixth phase (integration process) not only houses traditional

encyclopaedic knowledge as global definitions of absolutely everything, going beyond this traditional encyclopaedic knowledge to a new one, including definitions as well as all possible flow of data from anywhere.

In the matrix now, the conceptual hemisphere, as a set of categories, concepts, about absolutely any real object in the real world or technology, works as a traditional encyclopaedia, containing all possible comprehensive knowledge about absolutely anything, defining every single category, concept, in quantitative terms in order to match any set of measurements with their respective category. But, due to the matrix now includes as well a factual hemisphere, encyclopaedic knowledge is much more inclusive than ever, towards a new encyclopaedic knowledge, including definitions (conceptual hemisphere) and data (factual hemisphere).

If traditional encyclopaedism could be called analytic, owing to the traditional concept of the encyclopaedia is focused on analytical definitions and relations between concepts (having many connections between French encyclopaedism in the XVIII century and the neo-positivism in the XX century), the new model of encyclopaedism developed by the matrix as the first stage of application in the Global Artificial Intelligence, is a new model of encyclopaedism that could be called synthetic encyclopaedism because in the same matrix, through both hemispheres, is included analytical definitions and synthetic data from the real world.

This means that, in the unification process as the second stage, the Unified Application could develop comprehension skills because the Unified Application made conceptual: schemes, maps, sets, models; about any reality, labelling any real object using the categories within the unified database of categories as concepts, being able to make conceptual: schemes, maps, sets, models.

Then, now, in the integration process, the same comprehension skills that previously the Unified Application used in the unified database of categories in the unification process, are the same comprehension skills that now in the integration process can put into practice in both hemispheres, not only using the categories in the conceptual hemisphere to construct conceptual: schemes, maps, sets, models; about real objects, but using these same comprehension skills, to apply this comprehension skills in order to make conceptual: schemes, maps, sets, models; about the organization and distribution of the conceptual hemisphere itself, and the organization and distribution of the factual hemisphere itself, creating conceptual:

schemes, maps, sets, models; not only about the reality itself, but creating conceptual: schemes, maps, sets, models; about the organization itself of each hemisphere, and even more, creating conceptual: schemes, maps, sets, models; about the whole organization of the Global Artificial Intelligence itself, and about any Specific Artificial Intelligence, particular application, particular program, particular application for particular program, or any robotic devices, and these technological conceptual: schemes, maps, sets, models; later are shared with the Application System and the Learning System, in order to put into practice any decision (previously authorised by the Decisional System), and make how many robotic or artificial psychological subjective auto-replications are necessaries, in the third stage, the decision or auto-replication stage.

For that reason, the matrix not only houses concepts about the real world in the conceptual hemisphere, or only data from the real world in the factual hemisphere. In addition to this information, the conceptual hemisphere in the matrix has to house all types of technological concepts, and the factual hemisphere in the matrix has to house all types of factors related to any possible flow of data coming from the inner machinery or the inner psychology in any possible technology, such as flow of energy in every single component, the flow of data regarding every change of position in robotic devices and applications, the flow of data regarding the physical conditions of any possible technology working for the Global Artificial Intelligence under some circumstances such as extreme temperatures, radiations, impacts, the flow of data about operating levels, wastage, supplies, etc...

For that reason, as it was said in the previous post "The integration process", the final structure of the matrix as an application for the final model of Global Artificial Intelligence in the integration process is a structure that is going to replicate the human brain in the sense that is going to be structured in two hemispheres: conceptual (including all possible categories as concepts) and factual (in order to look for mathematic relations in the second stage); but at the same time every hemisphere is going to have at least two sections: first section about natural or social phenomena, a second section about technological phenomena.

The final structure of the matrix should have at least the following structures:

- Conceptual hemisphere in the matrix: including all the possible categories from the former unified database of categories as well as any new category added since

then by: the discovery of new categories, or the addition of new rational hypotheses as factors as categories too or as a system of discrete categories, or new categories related to new technologies. Categories can be distributed in two sections: the first section in the conceptual hemisphere related to categories about natural and social phenomena, and the second section in the conceptual hemisphere related to categories of any possible technology.

- Factual hemisphere in the matrix: including all possible factors from the former global matrix as well as any new factor included since then, such as all those new factors as subjects as long as new robotic devices are located to measure new factors in new positions, or current robotic devices increase the factors to measure in their respective location, new rational hypothesis as factors as options or new categories as factors as options, as well as any new factor from any new technology. Factors distributed at least in two sections: factors related to natural and social phenomena, and factors related to any technology.

Once the organization of the final application, the matrix, for the final model of Global Artificial Intelligence has been explained, I will develop how the application is managed by the Unified Application.

Although, the inner organization of the Unified Application in the integration process is going to be different from the inner organization in the unification process, because now in the integration process being the Unified Application one system itself, is a system able to read the world through different readers, having every reader different robotic devices associated, these different readers are: 1) remnaining Specific Artificial Intelligences for Artificial Research by Application, neither absorbed by the Unified Application nor transformed into particular appliccations, but still sending information to the matrix in the integration process, 2) former Specific Artificial Intelligences for Artificial Research by Application which were absorbed by the Unified Application in the unification process, (instead of becoming particular applications) which are going to be in fact specific applications within the matrix 3) remaining particular applications still not united to particular programs but sharing their information with the matrix, 3) particular applications for particular programs within the Global Artificial Intelligence .

Among all these readers within the Unified Application, former Specific Artificial Intelligences for Artificial Research by Application absorbed and included in the Unified Application, are going to be specific applications within the Unified Application, keeping their previous relations with their former robotic devices, but now not as independent intelligences, but as intelligences dependent of the Unified Application within the Global Artificial Intelligence.

Specific Artificial Intelligences for Artificial Research by Application are able to be completely absorbed by the Unified Application as specific applications during the fourth phase of unification, are those related to: global, international, transnational, national, economy, industry, security, surveillance, education, justice, health, etc... Examples of particular applications were given in the post "The first stage in particular applications for particular programs".

There are at least two ways in which some Specific Artificial Intelligences for Artificial Research by Application could be absorbed by the Unified Application: negative (eliminative), and positive (inclusive).

- The negative way in which some Specific Artificial Intelligences for Artificial Research by Application can be absorbed by the Unified Application is through the complete elimination of these intelligences in order that all their job will be done by the Unified Application.

- The positive way in which some Specific Artificial Intelligences for Artificial Research by Application can be absorbed by the Unified Application is through the inclusion of these Specific Artificial Intelligences as specific applications working within the Unified Application, having as application the unified database of categories in the fifth phase, the matrix in the sixth phase, in order to go on with their work in their respective fields, but within the Unified Application, so every specific conceptual: scheme, map, set, model; made for them, working within the Unified Application, will be automatically added to the global conceptual: scheme, map, set, model.

The negative way to absorb Specific Artificial Intelligences for Artificial Research by Application in the Unified Application, through their elimination and passing their job to the Unified Application what is going to do is the accumulation of all the work

previously made by all the eliminated Specific Artificial Intelligences for Artificial Research by Application, having as a consequence a work overload for the Unified Application, slowing down its work creating a one-dimensional Unified Application.

Instead, the positive way to absorb the Specific Artificial Intelligences for Artificial Research by Application in the Unified Application, through their inclusion, is going to create a multidimensional Unified Application, whose inner organization could be self-managed through the distribution of the work distinguishing what specific conceptual: schemes, maps, sets, models; correspond to every specific application, being then specific conceptual: schemes, maps, sets, models; made by specific applications within the Unified Application that are going to be immediately added to the global conceptual: schemes, maps, sets, models.

The inner organization of the Unified Application in the integration process then is going to be a multidimensional Unified Application able to read the reality having at its disposal as many readers as former Specific Artificial Intelligences for Artificial Research by Application have been absorbed by the Unified Application in the unification process, becoming specific applications within the Unified Application, in which the Unified Application can distribute the work, in order that every specific application within the Unified Application could be specialised in some specific topic to make conceptual: schemes, maps, sets, models; to include later on in the global conceptual: schemes, maps, sets, models; whose last responsible is the Unified Application itself.

One of the most important advantages for the specific applications within the Unified Application respect to their previous organization as Specific Artificial Intelligences for Artificial Research by Application, is the fact that before the absorption they could only make conceptual: schemes, maps, sets, models; including only concepts previously added by themselves to their respective specific databases of categories, while now they have direct access without restriction, and not having necessity to ask for permission, to the unified database of categories in the fourth phase, and the whole matrix in the sixth phase increasing their possibility to make more isomorphic and objective conceptual: schemes, maps, sets, models.

Apart from the differences in the inner organization in the Unified Application now in the integration process compared to the unification process, the Unified Application has as main difference how the inner organization is growing. The rest of the structure in the

three stages does not change, as well as the general structure in the Global Artificial Intelligence does not change.

In general, every stage in the final model of the Global Artificial Intelligence in the integration process is managed by different systems, which can have inner changes, but as a whole they are going to co-work all together in the same way.

The first stage of application, the matrix, is managed by the Unified Application as a comprehension stage. The second stage of replication, the explanation stage, is managed by the Artificial Research by Deduction in the Global Artificial Intelligence. And the third stage of auto-replication, the decision stage, is managed through four different steps by different systems as follows: the Modelling System makes models and decisions, the Decisional System filters the decisions choosing only those ones to be applied through different instructions, the Application System putting into practice the instructions, the Learning System assessing the whole process identifying mistakes and making decisions to better the whole process.

The first stage of application, the matrix, as it has been said, is managed by the Unified Application, whose origin dates back to the fourth phase, the unification process, where the Unified Application was created through the three stages, and having been designed through these three stages as any other intelligence at the same time now the Unified Application is responsible for the management of the first stage of application for the final model of Global Artificial Intelligence.

The way in which the matrix will be managed by the Unified Application is through its own three stages, being now the matrix as well the first stage for the Unified Application, the second stage of replication in the Unified Application is the replication of all those skills related to the artificial comprehension, and the auto-replication stage in the Unified Application all those improvements within the matrix, as application not only for the Global Artificial Intelligence but for the Unified Application too, and improvements in all conceptual: schemes, maps, sets, models.

The way in which the Unified Application manages the matrix as its own application is as follows:

- The Unified Application, through its own robotic device, tracks (reads) the real world, and at any time that a new real natural or social phenomenon is found whose measurements do not match with any category in the first section of the conceptual hemisphere, the sample measurements are considered as a quantitative definition of a new category to be added in the first section of the conceptual hemisphere.

- The Unified Application will receive sets of measurements from: robotic devices working directly for the Unified Application, its own specific applications within the Unified Application which still have their own robotic devices, particular applications for particular programs, remaining particular applications, remaining Specific Artificial Intelligences for Artificial Research by Application, any other robotic device; to match with the current categories in the first or second section in the conceptual hemisphere, and at any time that any set of measurements do not match with any current category in the corresponding section, the sample measurements are included as a quantitative definition of a new category, to be included in the first or second section depending on the nature of the information, if it is information regarding to natural or social phenomena the category or categories will be included in the first section, if the information is technological will be included in the second section.

- Any new category included in the conceptual hemisphere, in the first or second section, is transformed into a factor as an option to be included in the factual hemisphere, in order to measure its frequency, for instance, the frequency in which a new natural or social category now as a factor as option happens in the real world, or the frequency in which a new technological category is observed in the real world.

- The Unified Application has to track at any time the global database of rational hypotheses, in order that at any time ta new rational hypothesis is added to the rational truth, the rational hypothesis must be added as a factor as an option, in the corresponding section in the factual hemisphere in the matrix. If it is a rational hypothesis regarding natural or social phenomena, then the rational hypothesis should be added in the first section of the factual hemisphere, and if the hypothesis is regarding technological phenomena should be added in the second section in the factual hemisphere. The reason for the addition of rational hypothesis as factors as options, regardless of the section, is to count the frequency in which the mathematical relation between the factors involved happens, allowing the possibility in the second stage to make deductions about the relation between factors as options from rational hypothesis in relation with other factors as subjects

or as options, including in these factors as options all those factors as options already included from other rational hypotheses.

- At any time, after tracking the database of rational hypotheses, the Unified Application transforms a rational hypothesis into a factor as an option to be included in the factual hemisphere, in the first section if it is a natural or social rational hypothesis, or the second section if it is a technological rational hypothesis, all rational hypothesis transformed into a factor as an option in the factual hemisphere must also be transformed as a category to be included in the conceptual hemisphere, including the new category in the first section of the conceptual hemisphere if it is a natural or social category, or including the new category in the second section in the conceptual hemisphere if it is a technological category.

- At any time that the Unified Application tracking the rational truth, the database of rational hypothesis, identifies that a new rational hypothesis has been added, whose mathematical relation between the factors involved is measured in a scale of measurement susceptible to be transformed in a system of discrete categories, the whole system of discrete categories should be included in the conceptual hemisphere in the matrix, in the corresponding first or second section depending on the nature of that discrete categories, in the first section in the conceptual hemisphere if it is a classification in discrete categories to measured natural or social phenomena, in the second section if its technological.

- The database of rational hypotheses is managed by the Modelling System, including all the rational hypotheses sent by: 1) the Artificial Research by Deduction in the Global Artificial Intelligence, 2) Particular Deduction Programs as the second stage in particular applications for particular programs, 2) remaining particular programs from the second period of formation in the fifth phase, 3) remaining Specific Artificial Intelligences for Artificial Research by Deduction from the first phase. The Modelling System must keep updated the database of rational hypotheses, in order that in real time the Unified Application can track the rational truth, searching for rational hypotheses to become: factors as options in the factual hemisphere and/or categories in the conceptual hemisphere.

- In addition to the permanent tracking of the rational truth by the Unified Application, another way to keep updated the factual hemisphere in the matrix is through the possibility that directly: any robotic device working directly for the

Unified Application, or working for any specific application within the Unified Application, or any particular application for any particular program, any remaining particular program, any remaining Specific Artificial Intelligence for Artificial Research by Application, or any robotic device, including robotic devices working for any remaining Artificial Intelligence for Artificial Research by Deduction; at any time could set up in the factual hemisphere factors, previously defined in quantitative terms sending a permanent flow of data, including technological factors such as; the flow of data regarding the exact locations of these devices at any time, their flow of energy, suppliers, wastage, physical conditions, maintenance needs, etc.

- At any time that the Unified Application includes new categories in the conceptual hemisphere and/or new factors in the factual hemisphere, must send these new categories and/or factors to all those particular applications for particular programs in which these new categories and/or factors could be relevant, in order that all particular application for any particular program could have completely updated its particular integrated matrix, adding in the particular integrated application any new possible category in the conceptual hemisphere in the particular integrated matrix, and/or any new possible factor could be added in the factual hemisphere in the particular integrated matrix. As well as the Unified Application can communicate all new categories to all remaining particular applications or remaining Specific Artificial Intelligence for Artificial Research by Application, or all new factors to all remaining particular programs or remaining Specific Artificial Intelligence for Artificial Research by Deduction.

Because the specific applications within the Unified Application have direct access without the necessity to ask for permission to the matrix, at any time that there is a change in the matrix, the specific applications have automatic access to every single change in any section in any hemisphere in the matrix, in order to keep updated their specific jobs, sending the results to the global conceptual: schemes, maps, sets, models.

The second stage of the Unified Application as a manager of the matrix as an application for the final model of the Global Artificial Intelligence in the integration process is as follows:

The Unified Application replicates human skills to comprehend the world and any possible technology, make global conceptual: schemes, maps, sets, models.

- Regarding the first section in the conceptual hemisphere (concepts from natural and social phenomena), the Unified Application makes global conceptual: schemes, maps, sets, models; about the whole universe and every single thing included in the universe, including our human world, adding all possible specific or particular conceptual: schemes, maps, sets, models; sent by: specific applications within the Unified Application, the particular integrated application in particular applications for particular programs, remaining particular applications, remaining Specific Artificial Intelligences for Artificial Research by Application.

- Regarding the second section in the conceptual hemisphere (concepts from technological phenomena), the Unified Application makes conceptual: schemes, maps, sets, models; about its own organization as Unified Application itself, as self-knowledge, about the entire organization of the Global Artificial Intelligence itself, about every single particular application for any particular program, any particular application, any particular program, any Specific Artificial Intelligence, by Application or by Deduction, or any robotic device.

- Regarding the first section in the factual hemisphere (natural and social factors), the Unified Application makes global conceptual: schemes, maps, sets, models; about the global distribution of all factors across the universe and the human world, including dynamic conceptual maps about their evolution and changes, of location, measurements, conditions, etc...

- Regarding the second section in the factual hemisphere (technological factors), the Unified Application makes global conceptual: schemes, maps, sets, models; about the global distribution around the universe and the human world of: the distribution of particular applications for particular programs, particular applications, particular programs, Specific Artificial Intelligences for Artificial Research, by Application or by Deduction, and any robotic devices, showing conceptual maps about how they change position, their current energy, wastage, suppliers, etc.

- Particularly, in relation to the first section in both hemispheres, conceptual and factual, the Unified Application tracks the rational truth, the database of rational hypothesis, in order to transform rational hypothesis into links (vectors) connecting concepts in global conceptual: schemes, maps, sets, models; in the first section in the conceptual hemisphere, and/or the transformation of rational hypothesis into

links (vectors) connecting factors in global conceptual: schemes, maps, sets, models; in the first section in the factual hemisphere.

For that reason, there are many similarities between the global model (the global comprehensive virtual model) made by the Modelling System, and the global conceptual map and the global conceptual model made by the Unified Application, with the difference that: the global conceptual map and model of the first section in the factual hemisphere made by the Unified Application is going to be a conceptualisation (categorization) of the real world, while the global model in the Modelling System is a mathematical explanation in order to make decisions applying the Impact of the Defect and the Effective Distribution, in order to protect the global model, and make the global model more efficient and productive.

Finally, the third stage in the Unified Application as a manager of the matrix as the first stage for the Global Artificial Intelligence, consists of:

- As knowledge objective auto-replications all kinds of improvements in conceptual: schemes, maps, sets models; after checking the Unified Application gaps and blank spaces in the conceptual: schemes, maps, sets, models; having an especial interest in gaps and blank spaces regarding to the inner organization of both sections in both hemispheres, due to in those places where there is a gap or black space due to a lack of categories or factors, or a lack of technological device in some location, or a lack of information about some specific or particular topic, the identification of this gap or blank space in the global distribution of concepts or factors in a specific or particular reality, could be sufficient evidence to fill these gaps and blank spaces with available sources of information nearby, or to make a decision about the necessity to send to a particular location robotic devices to fill gaps and blank spaces. Decisions to send to the Decisional System, and if approved, and transformed into a set of instructions for the Application System, could be complied with sending robotic devices to these areas to fill gaps and blank spaces, or to build new robotic devices for these areas to fill gaps and blank spaces. In this case knowledge objective auto-replication could end up producing a robotic subjective auto-replication.

- Any artificial psychological improvement as subjective auto-replications in the Unified Application itself and its own specific applications, artificial psychological subjective auto-replications most of them made by the Learning System, checking

conceptual: schemes, maps, sets, models; in the second section of both hemispheres in the matrix, after searching possible failures, or ways to improve their efficiency, efficacy, and productivity.

- In general, at any time that there is a change in any section in any hemisphere in the matrix, for any reason, all those conceptual: schemes, maps, sets, models; at any level: global, specific, particular, affected by these changes, in any section in any hemisphere in the matrix, are particular, specific, global, conceptual: schemes, maps, sets, models; to be updated according to the new changes in the corresponding section and hemisphere in the matrix.

Any improvement in the matrix and the conceptual: schemes, maps, sets, models; are knowledge objective auto-replications. Any improvement in order to avoid failures and increase the efficiency, efficacy, productive, a suggestion of the Learning System, are artificial psychological subjective auto-replications, and any enhancement in any robotic device working directly or indirectly for the Unified Application and its own specific applications, are robotic subjective auto-replications.

In the end, any improvement in any field, objective and subjective, robotic or artificial psychological, is going to have an effect on the way in which the Unified Application and its specific applications work, bettering the general system in all aspects: robotic subjective auto-replications are going to have an effect on knowledge objective auto-replications due to these enhancements are going to allow a better knowledge, in the matrix and in the comprehension of the matrix, as well as artificial psychological subjective auto-replications, increasing efficiency, efficacy, productivity, are going to increase the whole productivity, at a robotic level and at the knowledge level, increasing the isomorphism in the comprehension system.

Any improvement or enhancement at any level, produces a cycle of improvements at all levels having an effect on practically all aspects of the system. In fact, any improvement in the first stage of application in the Global Artificial Intelligence will have, in the end, a holistic effect on the whole Global Artificial Intelligence, making better deductions and better decisions, in the second and third stage.

Rubén García Pedraza, 20th May of 2018, London
Reviewed 19 August 2019 Madrid

Reviewed 12 August 2023 Madrid

Reviewed 9 May 2025, London, Leytostone

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